Agency for Cultural Resource Management
Specialists in Archaeological Studies and Heritage Resource Management

08 March, 2017

Att: Mr Bernard de Wit
EnviroAfrica cc
PO Box 5367
Somerset West
7135

Dear Mr de Wit,

ARCHAEOLOGICAL IMPACT ASSESSMENT, KEREN ENERGY KAKAMAS SOLAR ENERGY FARM ON ERF 1654 KAKAMAS, NORTHERN CAPE

An Archaeological Impact Assessment (AIA) for the Keren Energy Kakamas Solar Energy Farm on Erf 1654 in Kakamas (Kai! Garib Municipality) in the Northern Cape, was undertaken by ACRM in 2012[1] (Figures 1 & 2).

The following heritage resources were recorded during the study:

- A highly dispersed scatter of Later Stone Age (LSA) and Middle Stone Age (MSA) implements were recorded during the study. The material was encountered on loose, degraded quartz gravels. The majority of the resources are in banded ironstone, with the remainder in quartz, quartzite and indurated shale. At least 10 cores/minimal cores were counted, indicating low level stone fabrication on the site. No activity areas or any evidence of human settlement was located. Two convex scrapers and one side scraper were found. No organic remains such as pottery or ostrich eggshell were found. Indications are that most of the remains represent discarded flakes and/or flake debris.

No graves or typical grave markers were found during the field study.

Grading of the archaeological remains

The small number, isolated and disturbed context in which they were found means that the archaeological remains were graded as having *low* (3C) significance.

The following recommendations were made:

1. No mitigation is required.

2. Should any unmarked human burials/remains or ostrich eggshell water flask caches be uncovered, or exposed during construction activities, these must immediately be reported to the contracted archaeologist (Jonathan Kaplan 082 321 0172), or the South African Heritage Resources Agency (Natasha Higgit 021 462 4509).

[1] Kaplan, J. 2012. Archaeological Impact Assessment, proposed Keren Energy Kakamas Solar Energy Farm on Erf 1654 Kakamas, Northern Cape. Report prepared for EnviroAfrica. ACRM, Cape Town

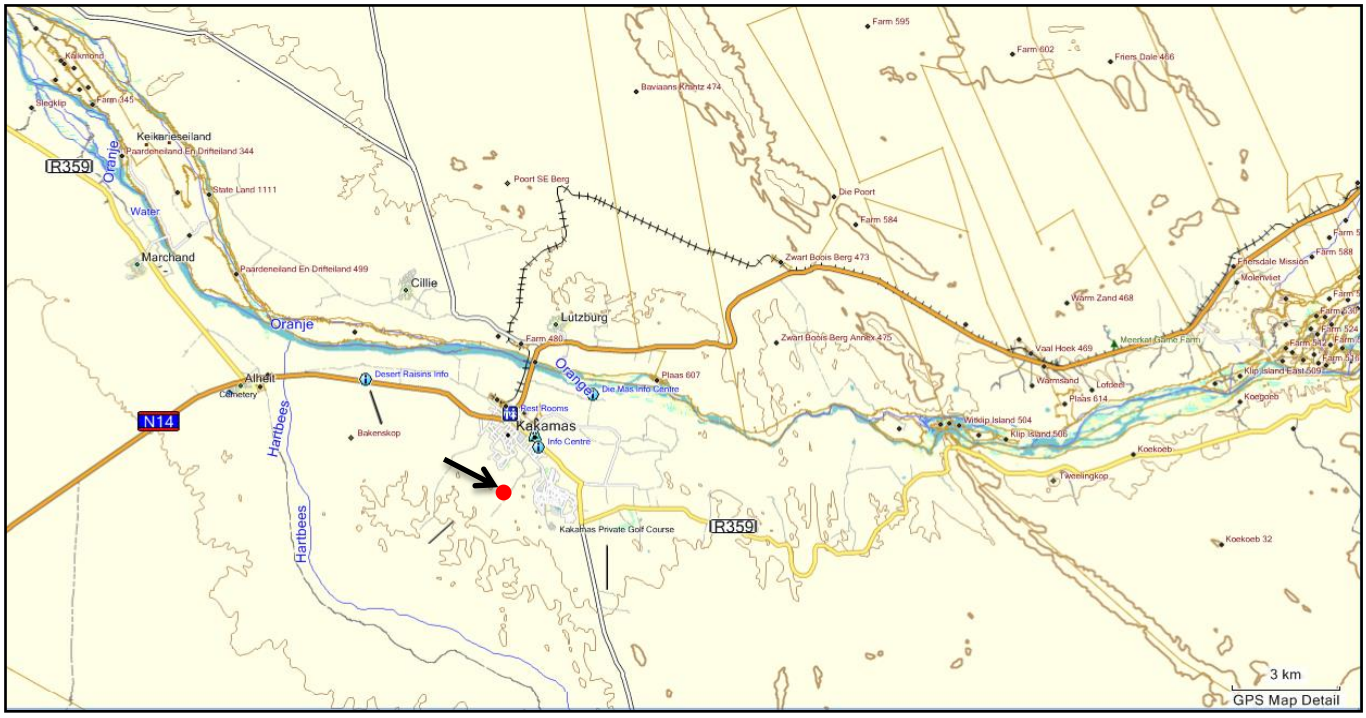

Figure 1. Locality Map. Arrow indicates the study site

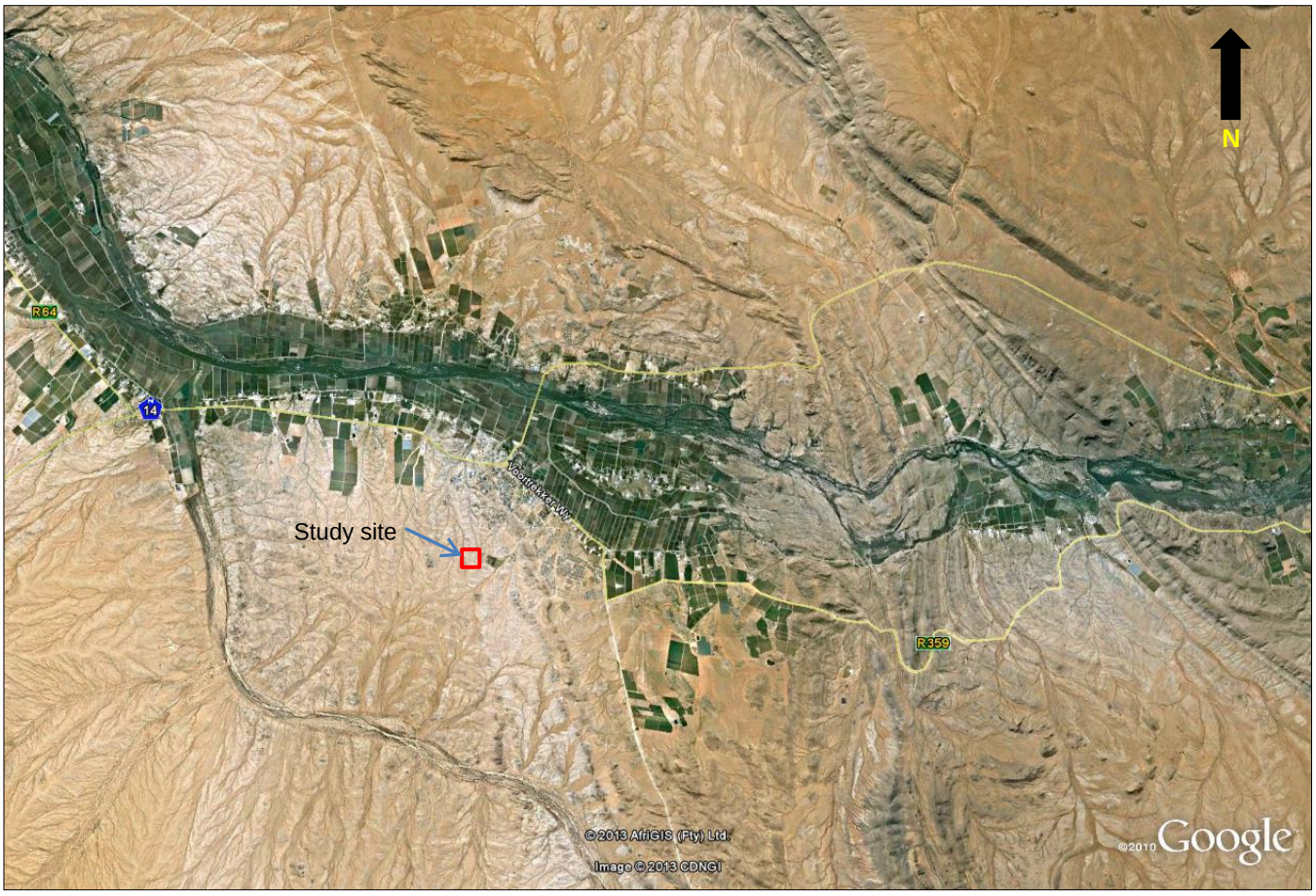

Figure 2. Google satellite map indicating the location of the proposed development site (red polygon) alongside the Waste Water Treatment Works

SAHRA reviewed the report (File No. 9/2/008/0001) on 28 June, 2012 and supported the recommendations made by the heritage practitioner.

The AIA report was submitted to the Department of Environment Affairs as part of the Environmental Impact Assessment process undertaken by EnviroAfrica cc.

However, the proposed project did not proceed and the environmental authorization lapsed, necessitating a new Basic Assessment process, and re-submission of the specialist archaeological report.

2. TERMS OF REFERENCE

ACRM has been instructed to:

1. Undertake a field assessment;
2. Confirm or re-evaluate the findings of the original study, and
3. Address cumulative impacts

3. FINDINGS

The proposed development site was visited on 21st February 2017 (Figures 3-6).

2.5 hrs was spent walking the site. The proposed powerline route to the Eskom Taaipit Kakamas substation was also assessed. The route follows an existing gravel road (Figure 6).

A track path of the assessment was also created (Figure 7).

A spreadsheet of waypoints and a description of the archaeological resources are presented in Table 1.

A collection of archaeological finds recorded during the field assessment is illustrated in Figures 8-10.


Figure 3. View of the proposed site facing south


Figure 4. View of the proposed site facing south

Figure 5. View of the proposed site facing north

Figure 6. Gravel road/powerline route to the Eskom Taaipit substation

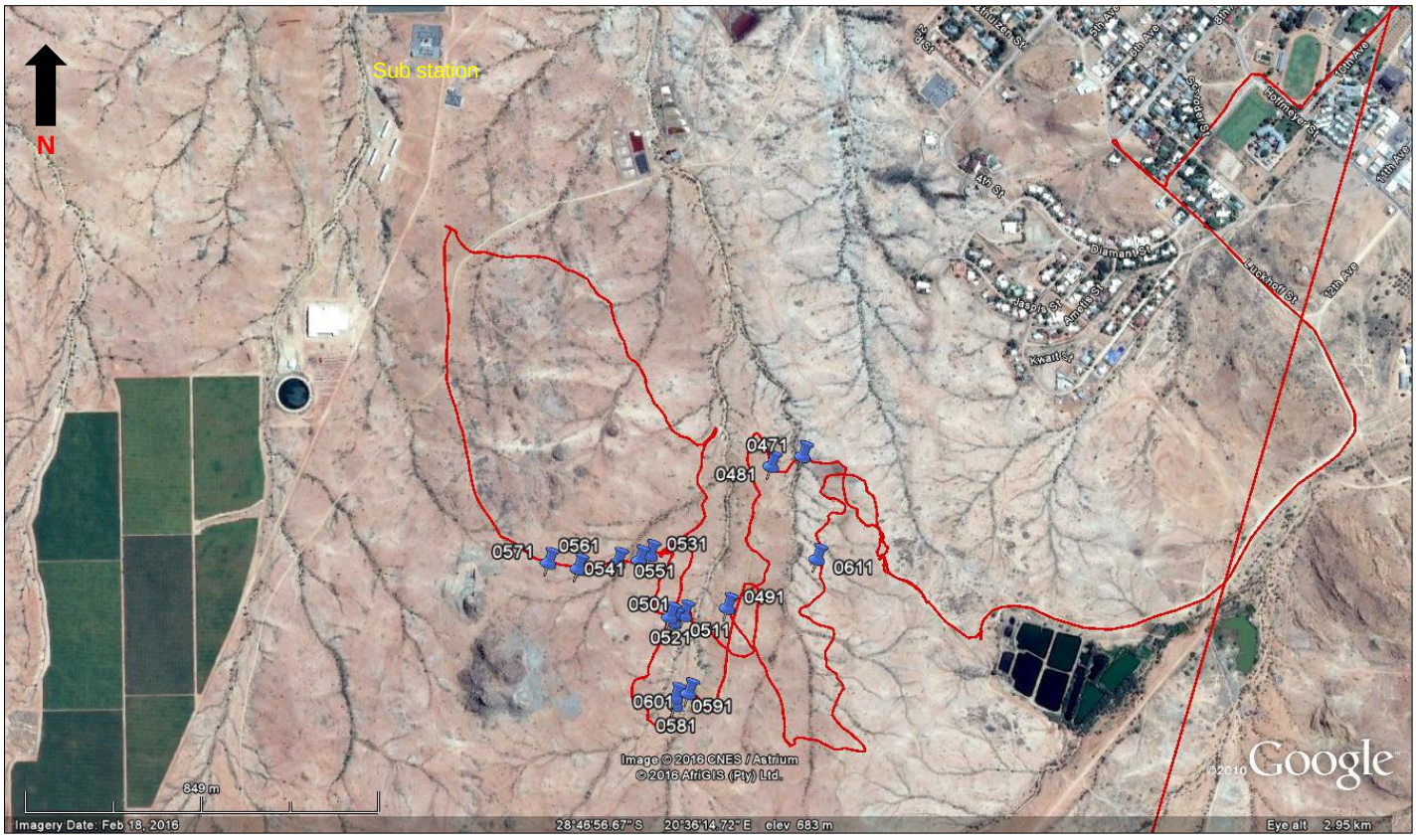

Figure 7. Track paths in red and waypoints of archaeological finds (refer to Table 1). Note the location of the Eskom Taaipit substation

Site	Name of farm	Lat/long	Description of finds	Grading	Suggested mitigation
	Erf 1654, Kakamas				
0471		S28° 46.990' E20° 36.384'	Large, rose quartz retouched flake alongside small track in dry stream channel	3C (low)	None required
0481		S28° 47.003' E20° 36.337'	2 banded ironstone flakes & 1 chunk on extensive sheet of eroded gravels	3C (low)	None required
0491		S28° 47.187' E20° 36.273'	Banded ironstone MRP on extensive sheet of eroded gravels	3C (low)	None required
0501		S28° 47.196' E20° 36.209'	MRP/chunk on eroded gravels	3C (low)	None required
0511		S28° 47.205' E20° 36.193'	Weathered banded ironstone MRP and broken flake on extensive gravels	3C (low)	None required
0521		S28° 47.199' E20° 36.188'	Banded ironstone cortex core on gravels	3C (low)	None required
0531		S28° 47.118' E20° 36.159'	Weathered banded iron-stone miscellaneous retouched flake in road/powerline servitude to Taaipit substation	3C (low)	None required
0541		S28° 47.125' E20° 36.143'	Banded ironstone flake in road/powerline servitude to substation	3C (low)	None required
0551		S28° 47.128' E20° 36.111'	Banded ironstone flake in road/powerline servitude to substation	3C (low)	None required
0561		S28° 47.136' E20° 36.052'	Banded ironstone chunk in road/powerline servitude to substation	3C (low)	None required
0571		S28° 47.129' E20° 36.008'	Banded ironstone cortex flake in road/powerline servitude to substation	3C (low)	None required
0581		S28° 47.313' E20° 36.196	Thin, indurated shale utilized cortex flake on gravels alongside dry stream channel	3C (low)	None required
0591		S28° 47.303' E20° 36.196'	Banded ironstone chunk on extensive gravels	3C (low)	None required
0601		S28° 47.298' E20° 36.216'	Small collection of late 19th /early 20th Century cheap, household ware	3C (low)	None required
0611		S28° 47.124' E20° 36.405'	Large quartzite cortex cobble/chunk	3C (low)	None required

Table 1. Spreadsheet of waypoints and description of archaeological finds

Figure 8. Collection of tools. Scale is in cm

Figure 9. Site 0471 & Site 0521. Scale is in cm

Figure 10. Collection of tools and Site 0601. Scale is in cm

4. CUMULATIVE IMPACTS ON ARCHAEOLOGICAL HERITAGE

According to the Department of Environmental Affairs (DEA) Renewable Energy EIA Application Database for renewable projects (new builds)[2], there is only one other renewable energy (RE) project planned within a 30km radius of Kakamas. Despite the presence of this site, it will not impact on archaeological resources in the proposed Kakamas PV site. It is also noted that the existing Kakamas Waste Water Treatment Plant is located about 500m south west of the proposed development site. An AIA for the proposed upgrading of the WWTW was undertaken by Kaplan[3], where a small number of stone tools in banded ironstone were recorded. Studies of several housing developments in Kakamas located dispersed scatters of archaeological heritage[4]. There is an old quarry located about 200m south of the proposed development site, while the Kakamas waste disposal site is located about 1.3kms to the south east.

Indications are that cumulative impacts will not need to be managed, since the surrounding area is not a sensitive archaeological landscape.

5. CONCLUSION

A reassessment of the Keren Energy Kakamas Solar Energy Farm on Erf 1654 confirms the results captured during the original study (Kaplan 2012), which found a small number of tools spread unevenly over the surrounding landscape.

The site assessment has shown that the development site is not a sensitive, threatened or vulnerable archaeological landscape.

As long as the recommendations made in the 2012 study are adhered too, there are no objections to the development, proceeding.

The recommendations must be included in the Environmental Management Plan (EMP) for the proposed project.

Yours sincerely

Jonathan Kaplan

[2] https://dea.maps.arcgis.com/apps/webappviewer/index.html?id=b8452ef22aeb4522953f1fb10e6dc79e

[3] Kaplan, J. 2013. Heritage Impact Assessment, proposed new Waste Water Treatment Works on Erf 1181 Kakamas. Report prepared for EnviroAfrica. ACRM, Cape Town

[4] Kaplan, J. 2016. Archaeological Impact Assessment, proposed housing development on Erf 1612 Kakamas. Report prepared for EnviroAfrica. ACRM, Cape Town

Kaplan, J. 2013. Archaeological Impact Assessment proposed low cost housing development in Kakamas, Northern Cape. Report prepared for EnviroAfrica. ACRM, Cape Town.